AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions and listings of claims in this application.

Listing of Claims:

1.   (Previously Presented) A short-range wireless access point enabling a mobile wireless device to resume service with a network server after the wireless device moves out of the coverage area of the of the access point, comprising:

a server including transceivers for short-range wireless communication within a coverage area and with a network server;

means for registering the mobile device when initiating proximity services with a service provider;

means for transmitting a code to the mobile device for identification purposes in short-range and network communications;

means for obtaining from the mobile device a wide area identification of the mobile device;

means for initiating a session for the mobile device with the service provider when within the coverage area; and

means for maintaining the session with the service provider when the mobile device moves outside the coverage area;

wherein the code and the wide area identification are to be coupled into a hashed code for proximity identification of the mobile device, and wherein the hashed code is to be transmitted to the mobile device along with an instruction to forward the hashed code to the network server to associate the code and the wide area identification in a subsequent request for service by the mobile device.

2.   (Previously Presented) The short-range wireless access point of claim 1, further comprising:

means for transferring the session to the network server when the mobile device moves outside the coverage area.

3.   (Canceled)

4.   (Previously Presented) The short-range wireless access point of claim 1, further comprising:

     means for coupling the access point to the service provider via an information network.

5.-6.   (Canceled)

7.   (Previously Presented) The short-range wireless access point of claim 1, further comprising:

     a service provider incorporated within the access point; and

     means for enabling the access point to contact the mobile device and provide services via the short-range communication link when the mobile device is within the coverage area or through a cellular network if the mobile device is outside the coverage area.

8.   (Previously Presented) The short-range wireless access point of claim 1, wherein the code is a MAC address and the wide area identification is a machine number for the mobile device.

9.   (Previously Presented) The short-range wireless accesses point of claim 1, wherein the short-range communication link implements Bluetooth protocols.

10.   (Previously Presented) The short-range wireless accesses point of claim 1, wherein the network server implements cellular protocols.

11.   (Previously Presented) The short-range wireless access point of claim 4, wherein the information network is the Internet.

12.   (Previously Presented) A method in a short-range wireless access point for enabling a mobile device to resume service with a network server, the service having been interrupted by moving the mobile device out of the coverage area of the access point, comprising:

establishing a short-range communication link for initiating a service with the mobile wireless device, wherein the short-range communication link is based on a local area identification of the mobile wireless device;

requesting from the mobile wireless device a second, additional identification through the short-range communication link, wherein the requested identification relates to a wide area network identification of the terminal;

receiving the additional identification from the mobile wireless device;

determining whether the service with the mobile wireless device through the short-range communication link is open;

establishing wide area connection with the mobile wireless device using a stored association in response to detecting that the short-range communication link is closed;

coupling the first and second identifications in a hashed code as a proximity identification of the mobile device; and

transmitting a message to the mobile device including the hashed code and instructing the mobile device to forward the message to the server for associating the first identification with the second identification in a subsequent request for service by the mobile device.

13.   (Previously Presented) The method of claim 12, further comprising:

providing the access point with the first and the second identification of the mobile device.

14.   (Previously Presented) The method of claim 12, further comprising:

coupling the access point to the service provider via an information network.

15.-16. (Cancelled)

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17.   (Previously Presented) The method of claim 12, further comprising:

incorporating a service provider within the access point; and

enabling the access point to contact the mobile device and provide services via the short-range communication link when the mobile device is within the coverage area or through a cellular network if the mobile device is outside the coverage area.

18.   (Previously Presented) The method of claim 13, wherein the first identification is a MAC address and the second identification is a machine number for the mobile device.

19.   (Previously Presented) The method of claim 12, wherein the short-range communication link implements Bluetooth protocols.

20.   (Previously Presented) The method of claim 12, wherein a network server implements cellular protocols in establishing a wide area connection.

21.   (Previously Presented) The method of claim 14, wherein the information network is the Internet.

22.-39. (Cancelled)

40.   (Previously Presented) An apparatus for enabling a mobile wireless device to resume service with a network server after the wireless device moves out of the coverage area of a short-range wireless access point, comprising:

a server including transceivers for short-range wireless communication within a coverage area and with a network server;

a registration unit configured to register the mobile device when initiating proximity services with a service provider;

a transmitting unit configured to transmit a code to the mobile device for identification purposes in short-range and network communications;

an obtaining unit configured to obtain from the mobile device a wide area identification

of the mobile device;

an initiating unit configured to initiate a session for the mobile device with the service provider when within the coverage area; and

a maintaining unit configured to maintain the session with the service provider when the mobile device moves outside the coverage area;

wherein the code and the wide area identification are to be coupled into a hashed code for proximity identification of the mobile device, and wherein the hashed code is to be transmitted to the mobile device along with an instruction to forward the hashed code to the network server to associate the code and the wide area identification in a subsequent request for service by the mobile device.

41.   (Previously Presented) The apparatus of claim 40, further comprising:

a transferring unit configured to transfer the session to the network server when the mobile device moves outside the coverage area.

42.   (Previously Presented) The apparatus of claim 40, further comprising:

a coupling unit configured to couple the access point to the service provider via an information network.

43.   (Previously Presented) The apparatus of claim 40, further comprising:

a service provider incorporated within the access point; and

a unit configured to enable the access point to contact the mobile device and provide services via the short-range communication link when the mobile device is within the coverage area or through a cellular network if the mobile device is outside the coverage area.

44.   (Previously Presented) The apparatus of claim 40, wherein the code is a MAC address and the wide area identification is a machine number for the mobile device.

45.   (Previously Presented) The apparatus of claim 40, wherein the short-range communication link implements Bluetooth protocols.

46.   (Previously Presented) The apparatus of claim 40, wherein the network server implements cellular protocols.

47.   (Previously Presented) The apparatus of claim 42, wherein the information network is the Internet.

48-56. (Cancelled)

57.   (New) A computer-readable medium having stored thereon, computer executable instructions that, if executed by a short-range wireless access point, cause the short-range wireless access point to perform a method for enabling a mobile device to resume service with a network server, the service having been interrupted by moving the mobile device out of the coverage area of the access point, comprising:

       establishing a short-range communication link for initiating a service with the mobile wireless device, wherein the short-range communication link is based on a local area identification of the mobile wireless device;

       requesting from the mobile wireless device a second, additional identification through the short-range communication link, wherein the requested identification relates to a wide area network identification of the terminal;

       receiving the additional identification from the mobile wireless device;

       determining whether the service with the mobile wireless device through the short-range communication link is open;

       establishing wide area connection with the mobile wireless device using a stored association in response to detecting that the short-range communication link is closed;

       coupling the first and second identifications in a hashed code as a proximity identification of the mobile device; and

       transmitting a message to the mobile device including the hashed code and instructing the mobile device to forward the message to the server for associating the first identification with the second identification in a subsequent request for service by the mobile device.

58.   (New) The short-range wireless access point of claim 1, further comprising a backend server configured to track and calculate services used by the mobile device when the mobile device is within a billing zone.

59.   (New) The short-range wireless access point of claim 58, wherein the backend server is configured to send billing data to the mobile device.

60.   (New) The method of claim 12, further comprising:

        sending a message to a backend server describing the mobile device and duration of the mobile device in a billing zone for calculation of a billing time of the mobile device.

61.   (New) The method of claim 60, further comprising:

        sending a message including the billing time to the mobile device.